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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------|---------------------|------------------|
| 10/579,433 | 06/14/2006 | Nazar Al-Khayat | 20073.0013USWO | 7863 |
| 52835 7590 08/08/2008 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902 | | | | |
| EXAMINER WILLIAMS, ARUN C | | | | |
| ART UNIT 2838 | | PAPER NUMBER | | |
| MAIL DATE 08/08/2008 | | DELIVERY MODE PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/579,433

Applicant(s)

AL-KHAYAT ET AL.

Examiner

ARUN WILLIAMS

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD/IC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 5/09/2008, 6/16/2006, 5/15/2006

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
 - (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
 - (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
 - (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
 - (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
 - (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
 - (g) BRIEF SUMMARY OF THE INVENTION.
 - (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
 - (i) DETAILED DESCRIPTION OF THE INVENTION.
 - (j) CLAIM OR CLAIMS (commencing on a separate sheet).
 - (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
 - (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).
3. The specification is further objected, referencing to claims in the specification which is recited on page 4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4,6,7,9-18,20,21,23-25,26,27, and 28 are rejected under 35

U.S.C. 102(b) as being anticipated by Wills, USPAT6,219,623.

As for claims 15-18,20,21,23-25,27, and 28, Willa discloses and shows in Fig. 1-3 a system for controlling which controls connection of a supply of AC power to a load and to a power supply grid, the supply of AC power being generated by an AC power generating system of the kind that comprises a source of power arranged to provide an electrical output (10), a converter (20) means for generating an AC power output to supply the load from the electrical output, and a control (70) means unit, which are operable to control the operation of the converter means and thereby to supply the power required to the load (40) both when the AC power output of the AC power generating system is connected to the power supply grid (60) as well as to the load and during independent operation of the AC power generating system to supply the load including in the event of disconnection of the AC power output from the power supply grid, the control means unit being operable in response to signals derived from sensed current and/or voltage of an electrical output which is generated by the converter means from the electrical output of the source of power, the system operable to monitor the current and voltage of the AC power output and the voltage of the power supply grid, mean to derive one reference from the monitored AC power output voltage, said one reference being for use as a reference in the operation of the converter means to control the generation of that AC power output during independent operation of the AC power generating system to supply the load, and to derive another reference from the monitored grid voltage, said control means unit being operable to replace said one

reference by the other reference which is derived from the monitored grid voltage when the AC power output is connected to the power supply grid such that generation of the AC power output by the converter means of the AC power generating system is controlled in accordance with the other reference that is derived from the monitored grid voltage when the AC power output of the AC power generating system is connected to the power supply grid as well as supplying the power required by the load; voltage reference (180) and voltage controller (140) (cols.5-6)

As for claim 26, Wills discloses other reference is also derived from an active power reference and a reactive power reference (col.5, lines 23-26)

Claims 1-4,6,7,9 – 13 and 14 are implicit in the structure and they recite the same elements in a method format.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
9. **Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wills in view of Lynch et al.(Lynch), US2004/0145357.**

As for claim 22, Wills differs from the claimed invention because he does not explicitly disclose AC power output current is monitored between the inductor and capacitor of an LC filter.

Lewis discloses and shows in Fig. 1 an AC power output current is monitored between the inductor and capacitor of an LC filter (par.[0004])

Lewis is evidence that ordinary skill in the art would find a reason, suggestion or motivation to use an AC power output current is monitored between the inductor and capacitor of an LC filter.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Wills by using an AC power output current is

monitored between the inductor and capacitor of an LC filter for advantages such as providing the ability to filter out unwanted frequencies (par.[0004]), as taught by Lewis.

Claim 5 is obvious in view the structure and they recite the same elements in a method format.

10. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wills in view of Lynch et al,(Lynch), US2004/0145357.

As for claim 22, Wills differs from the claimed invention because he does not explicitly disclose a phase lock loop having an input and an output, wherein said monitored grid voltage is fed to the input of the phase lock loop and said voltage reference signal is emitted from the output of said phase lock loop.

Lynch discloses and shows in Fig. 1 a phase lock loop (80) having an input and an output, wherein said monitored grid voltage is fed to the input of the phase lock loop and said voltage reference signal is emitted from the output of said phase lock loop (par.[0038])

Lynch is evidence that ordinary skill in the art would find a reason, suggestion or motivation to use a phase lock loop having an input and an output, wherein said monitored grid voltage is fed to the input of the phase lock loop and said voltage reference signal is emitted from the output of said phase lock loop

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Wills by using a phase lock loop having an input and an output, wherein said monitored grid voltage is fed to the input of the phase

lock loop and said voltage reference signal is emitted from the output of said phase lock loop for advantages such as providing a direct and quadrature wave exactly in phase with the voltage (par.[0037]), as taught by Lynch.

Claim 8 is obvious in view the structure and they recite the same elements in a method format.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arun Williams whose telephone number is 571-272-9765. The examiner can normally be reached on Mon - Thurs, 6:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Arun Williams

Art Unit: 2838

Examiner
Art Unit 2838

/A. W./
Examiner, Art Unit 2838

*/Bao Q. Vu/
Primary Examiner, Art Unit 2838
July 31, 2008*